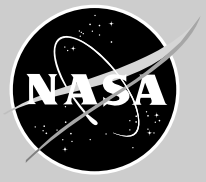
Follow-On To The Agency Cost-Per-Copy Contract In The Digital Age:

A Business Case

October 2000



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Executive Summary

In June 1996, the first Agencywide, performance-based Cost-per-Copy (CPC) contract was awarded. The contract was the result of an initiative to reduce convenience copier costs and streamline the administrative and procurement process for this service throughout NASA.

The CPC contract is presently in its last year and when it expires, it will have provided approximately $4.5M in costs savings to the Agency. At the present time, there are approximately 2,135 copiers provided and maintained under the contract. Based on the success of the existing CPC contract, an Agencywide program is still believed to be the best approach for providing high-quality copier support, supplies, service and maintenance.

The issue is what form the next copier contract should take and what contract vehicle should be used. The purpose of this business case is to research the viable options and present the results in order to determine the best copier solution for NASA. Included in this business case is cost information gathered from the General Services Administration (GSA), Outsourcing Desktop Initiative (ODIN) vendors, and independent copier vendors. The customers, users, and stakeholders for this initiative are the Agency Enterprises, Centers, functional staff offices, operations, and NASA contractors.

Since the current CPC contract was awarded, a major change in the copier market has been the introduction of digital copier equipment and the ability to network these digital machines so customers can access them from their desktop. The advances in digital technology and the existence of the ODIN contract introduce new factors which must be considered.

For the purpose of this study, a 5-year contract period was assumed. With input from the NASA Printing and Copy Managers, the basic follow-on requirement was established at 2,000 standalone (non-networked) copiers. In addition, six NASA Centers estimated that they will migrate to networked copiers for some or all of their copier requirements during the contract period. Because of the uncertainties associated with the technology and pricing, most Centers considering networked copiers proposed a phased-in approach. As a result, projections of networked copier requirements were estimated at 85 in Year 1 up to a maximum of 165 in Year 5, for an average of 135 per year.

A Baseline Case was developed, describing a likely cost scenario if there was no Agencywide vehicle to acquire copier services. Figures from GSA were used for the baseline. The GSA catalog provides precompeted prices for standalone and networked copiers. GSA is accessible to all government agencies and is a logical source for this support in the absence of a whole Agency program. The Baseline Case was held to the same requirements of a 5-year contract period, 2,000 standalone copiers, and 135 networked copiers.

For the basic requirement of 2,000 standalone copiers, vendor estimates were obtained and compared to the Baseline Case (GSA prices). A comparison was also made to the average annual cost of the current CPC contract.

The networked copiers represent a new Agency requirement not covered in the existing CPC contract; therefore, a different approach was taken for comparison purposes. Networked copier estimates obtained from vendors were applied to an average quantity over the 5-year period, and the results were compared to

GSA prices for the same quantities. In addition, since the ODIN contract was considered as a possible source of networked copier services, estimates were obtained from the ODIN vendors and used in the comparison.

Total Cost Comparison of Approaches to Copier Service Acquisition

	Current CPC	GSA Baseline	ODIN	New CPC
Standalones	$18,746,000	$37,000,000	$20,153,000	$20,153,000
Networked	N/A	$9,262,500	$9,900 000	$6,262,500
Total	$18,746,000	$46,262,500	$30,053,000	$26,415,500

A total cost comparison to the current CPC contract is not entirely valid because of the new networked copier requirements. The ODIN contract would not accommodate standalone copier services so the standalone estimate for the ODIN approach reflects the cost of the Agencywide CPC contract. The total estimated cost of a new Agencywide CPC contract for both standalone and networked copiers would be significantly cheaper than any other procurement approach. However, NASA's plan to incorporate networked copiers as part of the Agency's requirement is expected to have an overall impact on the cost of the CPC program. In order to address this issue, this business case shows a workgroup model that demonstrates a typical office configuration where networking printing may be appropriate. It also previews a plan to mitigate the anticipated cost increase to the new contract.

The recommendation of this business case is that NASA should award an Agencywide contract that includes both standalone and networked requirements. For standalone machines, it would be expected that all NASA Centers utilize the contract. It would also be expected that each NASA Center evaluate their requirements to determine whether it is cost effective for them to move to a networked copier environment. If so, the Centers would be strongly encouraged to first consider the proposed Agencywide contract, as it is the preferred method of acquiring networked copier services. This choice is reinforced by the market knowledge of the NASA Printing and Copy Managers who believe that the combined standalone and networked copier requirements will encourage very competitive bidding among independent vendors. The resulting bid prices could be lower than those provided for this business case. Agency Printing and Copy Managers also believe that NASA's requirements for networked copiers over the next 5 years will not be large. However, a consolidated contract will provide a clear upgrade path from standalone to networked copiers.

The existing CPC contract was the Agency's first example of partnering among the Centers to award a single contract for administrative services, and it served as a model for several other successful NASA-wide business initiatives. The continued success of the CPC contract will be measured not only by cost savings to the Agency, but also by the contribution this partnership between the Centers has made to the NASA mission and strategic goals.

PREFACE

On August 1, 1996, the first Agencywide Cost-per-Copy (CPC) contract went into effect for black and white convenience copiers. The contract encompassed the provision of high-quality copier support, supplies, service and maintenance to the Agency. The success of this contract is encouraging for a number of reasons. It represents a number of firsts for the Agency in terms of synergy among the NASA Centers and as the Agency's first performance-based, consolidated contract initiative for a common service. This Agencywide contract will expire on July 31, 2001.

Goddard Space Flight Center is the Lead Center for the current Agencywide Cost-per-Copy contract. Because new copier technology has changed the parameters for a follow-on contract, Goddard was requested to research and prepare this business case to facilitate a decision on the best contracting method to use.

1 INTRODUCTION

The issue of copiers impacts a significant portion of the Agency. Our copier customer base is comprised of Enterprises and Centers, staff in functional and operational offices, and both civil servants and contractors, all having copying requirements at some level. Through the existing CPC Agency contract, 2,135 copiers are currently in place. (See table 1.)

The management and distribution of NASA's copier resources are overseen by the Agency's Printing Management organization. In keeping with the Agency's philosophy, Printing Management activities aim to develop more effective and efficient methods for providing better products and services at less cost so that NASA can remain responsive to future opportunities under tight fiscal constraints.

By law, NASA is required to annually report to Congress the cost and production of copiers and of laser printers identified as high-speed, capable of producing more than 50 copies per minute. These machines are considered controlled equipment and are subject to approval by the Joint Committee on Printing, the NASA Printing Management Officer, and the Installation Printing Management Officer (Title 44 United States Code (U.S.C.) 103, 312, 501, and 502).

Based on experience gained through managing the current CPC contract, several key benefits have been realized:

- Streamlined procurement
- Centralized administration
- Cost savings
- Common Agency standards established
- Enhanced programmatic management, controls, and reporting
- Easy access maintenance (Single POC)
- Total executive level backing
- Synergy between Agency Printing Management organizations

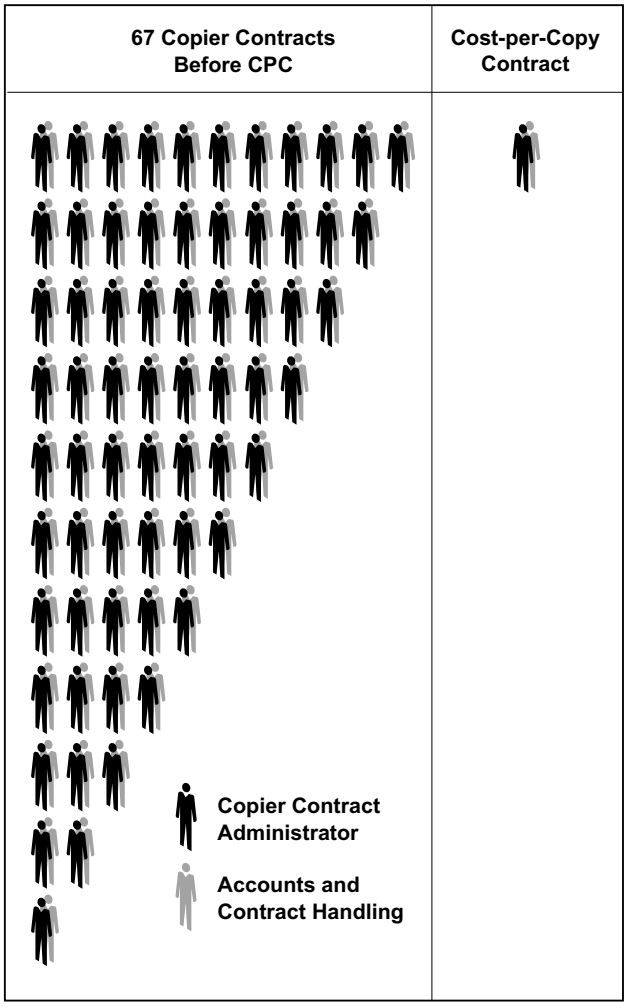
Prior to 1996, each NASA site independently contracted for its copiers and related services. There were fourteen different NASA sites that each had at least one contract for copiers and/or copier services. For example, Goddard Space Flight Center main-

Table 1. Current Copier Count Agencywide CPC Contract

Location	Vol. 1	Vol. 2	Vol. 3	Vol. 4	Vol. 5	Total
Ames Research Center	26	63	54	3	4	150
Dryden Flight Research	14	20	13	0	0	47
John H. Glenn Research Center	39	54	11	4	2	110
Goddard Space Flight Center	48	158	127	4	15	353
Goddard Institute for Space Studies	3	0	3	0	0	6
Wallops Flight Facility	21	27	8	0	1	57
NASA Headquarters	2	34	19	5	10	70
NASA Jet Propulsion Laboratory	59	66	107	0	0	232
Johnson Space Center	123	60	31	28	21	263
Kennedy Space Center	184	138	34	13	0	369
Langley Research Center	67	74	29	8	2	180
Marshall Space Flight Center	70	61	15	13	4	163
Stennis Space Center	30	27	40	0	0	97
NASA White Sands Test Facility	1	28	9	0	0	38
Total	**687**	**810**	**500**	**79**	**59**	**2,135**

tained over 67 copier services contracts, each with multiple maintenance and service agreements at various price levels. Kennedy Space Center procured copier services from at least three different contractors. On the other hand, Marshall Space Flight Center owned their copiers, maintained an inventory of replacement parts, and administered three different maintenance support contracts. From a programmatic standpoint, NASA's copier management program for the most part was inefficient, difficult to oversee and control, and not cost effective. (See table 2.)

Table 2. Administrative Savings at GSFC



Over the 5 years of the contract, it is estimated that the current CPC contract will have saved the Agency 4.5 million dollars. (See figure 1.) In addition to the benefits previously mentioned, the CPC contract supported Agency strategic and programmatic goals as well. The success of the current program along with the research conducted for this business case support the finding that an Agencywide copier contract continues to be the right course for NASA.

In the follow-on contract, the Agency should retain as many of the benefits realized in the original CPC contract as possible while also considering the impact and options brought to light by digital and networked technology. This business case is designed to address these options and present comparative data in order to determine the best program to meet the cost and programmatic objectives of the Agency for the copier follow-on contract. Several contract options for the Agency follow-on CPC contract for both standalone and networked machines and their maintenance will be discussed.

2 TODAY'S COPIER TECHNOLOGY

When NASA signed the first Agencywide CPC contract in 1996, the industry standard for copiers was analog technology. What set these machines apart from each other was copy speed and service. Feature-wise, the machines were essentially the same. Today, a major change in the copier market has been the introduction of digital equipment and the ability to network these digital machines so customers can access them from their desktop. Networked digital machines can be configured to provide the customer with the full range of capability which includes: copy, print, scan and fax, or any combination thereof. Although digital copiers were introduced in 1995, they have shown a steady and substantial increase in market share. In 2001, it is expected that the total number of digital copier placements will exceed 50 percent of total requirements, essentially rendering analog copiers obsolete in the next few years. (See figure 2.) This trend reflects customers' desires for more efficient methods of meeting their various desktop needs, using increasingly sophisticated technology.

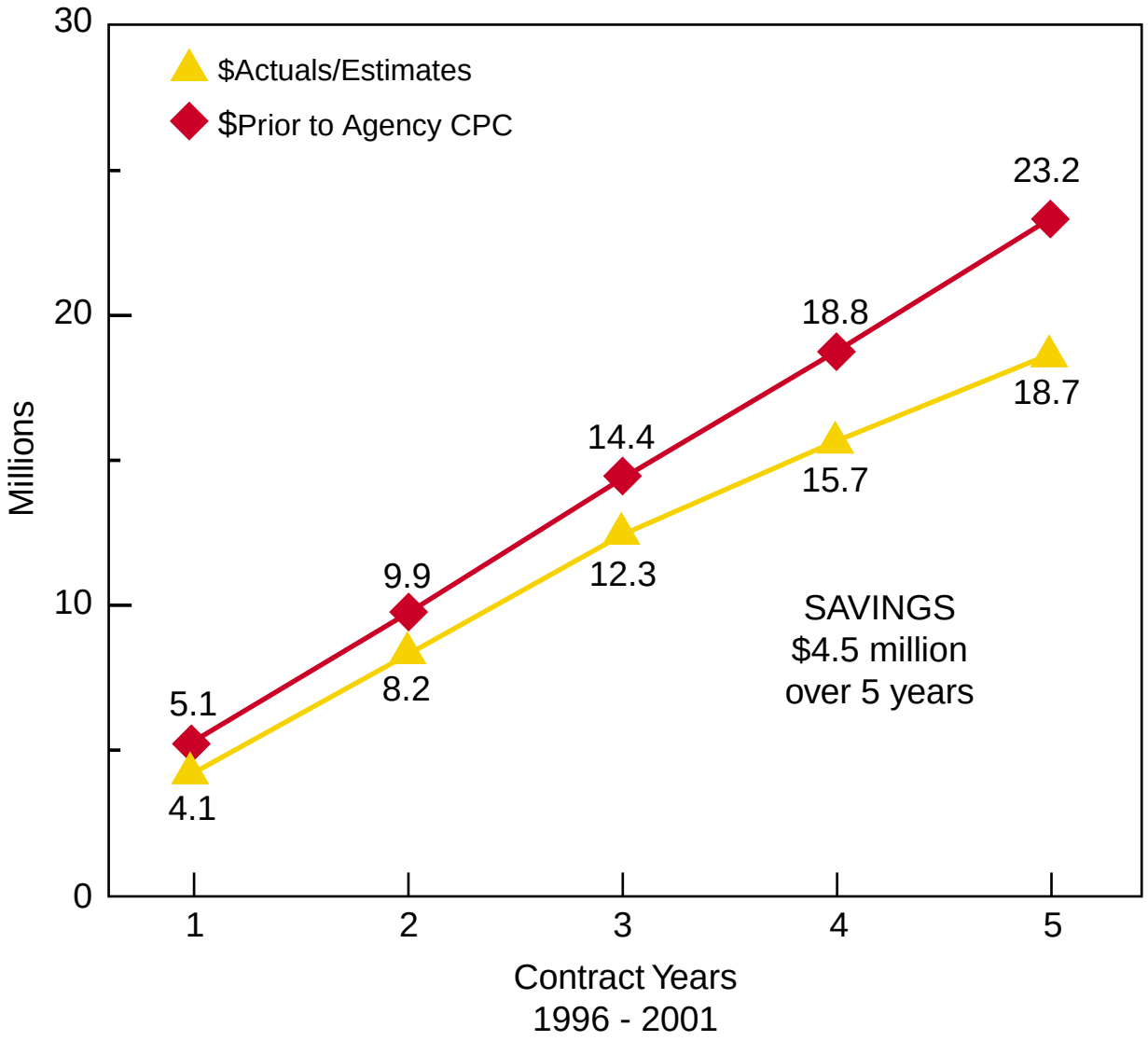


Figure 1. Current CPC contract costs compared to copier costs prior to CPC (projected forward).

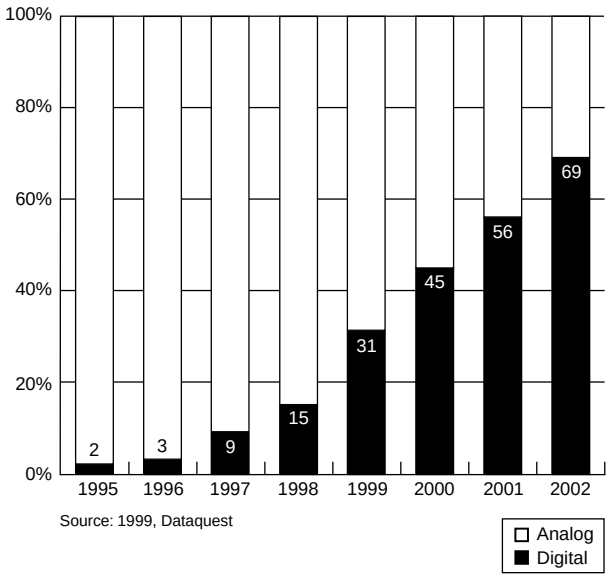


Figure 2. Percentage of Digital Copier Placements versus Analog in U.S. Market.

The distinctions in technology and terminology are:

a. *Analog machines* scan the original through light, lens, and mirrors to directly transfer the image on a copier drum. Multiple copies are produced with a separate pass of the light source for each copy required. The image cannot be transferred to other devices since this is a direct imaging process.

b. *Digital machines* scan each original once and convert the image, which is stored into memory before the copy is made, into digital format. Multiple copies are made from memory, thus eliminating the need for multiple scans of the original for additional copies. Digital machines can transfer data to and from the device, which enables them to function as standalone copiers or networked printers, fax units and/or scanners.

c. *Standalone copiers are not connected to the network.* They can be either analog or digital technology.

d. *Digital machines can be connected to the network* and are usually placed in "group" settings. The customers can send commands to print, copy, scan, and fax directly from their desktops to the machine.

e. *Convenience copiers are those designed for office setting use* rather than production facility use. This business case concerns only convenience copiers.

The advances in digital technology affecting the copier industry and the existence of another Agency contract which involves Information Technology (IT), specifically NASA's Outsourcing Desktop Initiative (ODIN), cause us to examine our follow-on contract options more closely.

3 CONTRACT VEHICLES

For the standalone requests, this business case assumes a continuation of the Agencywide CPC approach. For the networked copier requests, the options are to include them in the CPC contract or as part of NASA's Outsourcing Desktop Initiative (ODIN).

Following are brief synopses for each contract vehicle, providing some background and benefits of each.

3.1 CPC Program

The concept for the current CPC contract was a model effort for NASA. Born out of the spirit and recommendations of Al Gore's National Partnership for Reinventing Government (NPRG) and NASA's consolidated contract initiative (CCI), the Cost-Per-Copy contract embodied Administrator Goldin's challenge to employees to find innovative ways of doing their jobs faster, better, and cheaper.

In a cost-per-copy contract environment, the contractor provides convenience copiers, all supplies including toner (which previously was a separate high cost item for all NASA sites), preventive maintenance, repairs and repair parts, training, moves, and associated labor costs. These convenience copiers were viewed as an easy item to consolidate into one Agencywide contract that could yield considerable savings. Consolidating NASA's copier needs into one

contract would significantly reduce administrative costs associated with contracts being competed, awarded, administered, and closed out. Under the CPC program, NASA purchases copier services from the vendor and pays for this service on a per-copy basis.

In fiscal year 1994, NASA spent over 6.4 million dollars on photocopying services. Reducing costs was a driving factor in the first consolidation effort. In an effort to reduce costs, the number of copiers provided and the size of the copier were adjusted to align with the user's actual minimum monthly copy production. Prior to the CPC program, many users purchased top-end copiers with little regard to cost versus production.

In May 1997, the NASA Administrator signed the new NPG 1490.5A, "NASA Procedures and Guidelines for Printing, Duplicating, and Copying Management," which mandated the use of the CPC contract by all NASA sites for convenience copiers in volume bands 1 through 5. (See table 3.) Equipment which exceeds volume band 5 speed is considered production facility copier equipment and not intended for office use. It was NASA's intent to require users to comply with these usage standards and to utilize the Agency CPC contract for their copier requirements to ensure program success.

Table 3. NASA Monthly Copier Range by Volume Band (VB)

VB	MINIMUM	MAXIMUM
1	1	5,000
2	5,001	15,000
3	15,001	30,000
4	30,001	50,000
5	50,001	80,000

3.2 ODIN Program

NASA considers its desktop, server, and intra-Center communications assets vital to its success as the world leader in aeronautics, space exploration, and scientific research. NASA personnel use IT to support its core business, scientific, research, and computational activities. As NASA continues to downsize its civil service workforce, the Agency strives to optimize the productivity of its workforce through the efficient use of desktop computers, high performance networks, and sophisticated applications.

The ODIN program is a long-term outsourcing arrangement with the commercial sector. Under this program, NASA is transferring the responsibility and risk for providing and managing the vast majority of the Agency's desktop, server, and intra-Center communication assets and services to the industry, while NASA downsizes and refocuses its IT personnel to the Agency's core missions. It is imperative that the commercial sector delivers cost-effective ODIN services, which meet NASA mission and program needs while achieving a high level of customer satisfaction.

Overview of the ODIN Service Model

Seat Types. An ODIN seat type defines a standard bundle of services. Each seat type provides a hardware platform and a combination of services at an appropriate service (or response) level to provide users with needed functionality and response times.

Services. Each seat type has bundled with it a number of defined ODIN "services." These services describe the specific nature of the hardware, software, and support services provided with that seat type over the lifecycle of a delivery order.

Service Levels. Each ODIN service is defined in terms of characteristics that describe the "level" or quality of that given service. Examples of "service levels" include response time, resolution time, availability, and customer impact.

Network Attached Device (NAD). ODIN charges a monthly fee for devices not owned by ODIN to be connected to the network, i.e., a NAD charge.

A NASA-wide ODIN contract has been established with 7 vendors. (See table 4.) The intent is to provide integrated network and desktop workstations and technical support to the Agency. While it is an Agencywide program, it is not mandatory for desktop computer systems, nor does it incorporate copiers at this time.

Table 4. ODIN Vendors

ODIN VENDOR	CENTER SUPPORTED
CSC	*
DYNCORP	*
FDC	*
ACS (formerly Intellisource)	Goddard (Greenbelt, Wallops & GISS) Dryden, Ames, Glenn, Langley
OAO	Johnson, Kennedy, Marshall, Stennis
SAIC	NASA Headquarters
Wang	*

* Not selected by any Center for first delivery order

The ODIN contract would need to be modified to add networked copiers and any standards and specifications NASA requires for the CPC program. Copier customers would purchase "copier seats" and "services" in keeping with the ODIN model.

4 THE BUSINESS CASE FOR STANDALONE COPIERS

In preparing the case for obtaining continued standalone copier services beyond the term of the current contract, two options were considered. First, award a new Agencywide CPC contract competed among independent vendors, or second, abandon the Agencywide concept and require each Center to procure its own copier services. This section provides a cost comparison of these approaches and includes a comparison to the cost of the current CPC contract.

4.1 Assumptions

- This will be a 5-year contract (1-year basic with one 4-year option). These terms indicate an Agency investment in the CPC program. It also increases vendor confidence in long-term business with NASA, thus increasing the potential for competitive proposals.
- 2,135 standalone analog copiers represent the total copier requirement under the current contract.
- An estimate of 2,000 standalone digital copiers was used for the new requirement. This figure is based on input from Agency Printing and Copy Managers.
- The difference between the current contract estimate of 2,135 and the follow-on requirement of 2,000 standalones represents a migration expected over the term of the follow-on contract to networked machines.
- For calculation purposes, the number of standalone copiers will remain constant throughout the 5 years of the contract. In reality, it is expected that the number of standalones will be higher than 2,000 in the first years of the contract and lower than 2,000 in the later years due to the gradual ramp-up of networked copiers, but 2,000 was used as the average across the 5-year period.
- All costs contained in this business case are estimates unless stated otherwise and do not necessarily reflect how the vendors would bid the procurement.

4.2 Baseline Case

The GSA cost for 2,000 standalone copiers was derived from GSA's online "Multiple Award Schedule." The GSA catalog is available and accessible for all Government agencies to use and, as such, is a likely, comparable source for organizations to use if they were to independently procure or lease a copier for their use. The operative principle of the Baseline Case is that there would be no CPC program, and everyone would be purchasing or leasing the equipment of their choice without concern for meeting minimum copy quantities. These were the conditions that existed for all Centers before CPC.

Although volume discounts would potentially be applied if all 2,000 copiers were obtained from GSA on an Agencywide basis, the Baseline Case assumes that each Center would procure its copier services separately; therefore, no volume discounts were applied to the GSA prices. The total estimated yearly cost to the Agency of the Baseline Case is $7,400,000. (See table 5.)

Table 5. Baseline Case Estimate for 2,000 Standalone Machines

	ESTIMATED YEARLY COST	ESTIMATED 5 YEAR COST
Baseline Case (GSA)	$7,400,000	$37,000,000

4.3 Current CPC Contract

For the current contract, which represents existing standalone copier requirements, actual costs were obtained from the beginning of the contract through Year 4. Using the estimated copier volume and the contract rates for Year 5, a projected cost for the final year of the contract was calculated. The actual and projected costs were then used to derive an average annual CPC cost of $3,749,000. (See table 6.)

4.4 New CPC Contract

Under this scenario, a contract for NASA's standalone copier requirements would be competed among all interested open market copier manufacturers and vendors. The selected firm would be responsible for placing and maintaining such copiers at all Agency Centers.

Independent copier vendors were contacted and asked to provide estimates for this business case. NASA provided data regarding its estimated requirements and monthly minimum production figures for each volume band. Responses were received from two vendors, identified here as Vendor A and Vendor B. There was a wide disparity in estimates from the two vendors. (See table 7.) While the composite CPC rates by volume band estimated by Vendor A are 7.5 percent higher than the average annual cost for the current contract, the difference can be

Table 6. Current CPC Contract Costs for Standalone Machines

	ACTUAL THROUGH YEAR 4	PROJECTED FOR YEAR 5	TOTAL PROJECTED 5 YEAR COST	AVERAGE ANNUAL COST
Lanier	$15,746,000	$3,000,000	$18,746,000	$3,749,000

easily explained (see the analysis section below). However, the composite rates estimated by Vendor B were 106 percent higher than the current average annual cost, which cannot be easily explained. For purposes of this business case, it was determined that the lower rates provided by Vendor A reflect a more realistic estimate of potential costs under a competitive procurement and therefore were used for comparison purposes in the business case.

Table 7. Independent Vendor Estimates for 2,000 Standalone Machines

	ESTIMATED YEARLY COST	ESTIMATED 5 YEAR COST
Vendor A	$4,030,500	$20,153,000
Vendor B	$7,755,010	$38,775,000

4.5 Analysis

Table 8 depicts the cost comparison of the Baseline Case, the current contract, and the new CPC contract. When compared to the Baseline Case, the option of awarding a new CPC contract would clearly be the most cost effective approach. The GSA estimate is 46 percent higher than the Vendor A estimate, a difference that could not be easily overcome even if discounts were available from GSA. Based on this information, there does not appear to be a cost justification for utilizing the GSA approach for NASA's standalone copier requirements.

The cost estimate for standalones in the new CPC contract does represent a 21 percent increase over the equivalent cost of the current contract (assuming current contract rates applied to the new standalone requirement of 2,000 copiers). However, the new CPC cost estimate only represents a 7.5 percent increase over the total estimate at completion of the current contract (using 2,135 copiers). The increase can be attributed to three major factors. First, digital copiers are more expensive to manufacture than analog copiers, and that cost is passed on to the consumers. Second, the incumbent proposed the current contract rates based on providing rebuilt analog equipment and on NASA's projection of a much higher copier volume than we actually utilized. Once they realized that they would not be able to reach the performance metrics with rebuilt machines, they changed their approach and supplied new machines instead, which increased their capital expenditures. In addition, the anticipated revenue based on an additional 30 percent of copy volume never materialized. So based on NASA's actual volume over the past 4 years, it is doubtful that any vendor for the new contract would propose the highly favorable rates found in the current contract. Third, the estimates provided by the vendors for this business case are possibly conservative due to the fact that they were provided in a non-competitive environment in response to a request for information.

Table 8. Summary Cost Comparison for the Standalone Business Case

	STANDALONE COPIERS	YEARLY COST	5 YEAR COST
NEW CONTRACT REQUIREMENTS	New CPC Estimate	$4,030,500	$20,153,000
	Baseline Estimate (GSA)	$7,400,000	$37,000,000
CURRENT AGENCY REQUIREMENTS	Current CPC (Analog)	$3,749,000	$18,746,000

So while it is likely that the cost to the Agency of replacing the existing standalone copiers will increase, staying with an Agencywide CPC contract is still considered to be the most beneficial to the Government.

5 THE BUSINESS CASE FOR NETWORKED COPIERS

As network technology has evolved over the past five years, the concept of shared print services has become more popular and has been incorporated as the standard in the ODIN model. At the same time, there has been an increasing maturity in copier technology, leading to the convergence of print and copy services with introduction of the networked copier. High-speed networked copiers can combine print, scan, and fax capabilities to provide efficiencies and increased productivity in a workgroup setting. The added functionality, of course, adds cost. It is possible to offset some or all of the additional cost by eliminating individual peripheral equipment, which involves changes in workgroup methods and culture.

In order to meet the Agency's requirement for networked copier services, the options considered for this business case include acquisition from the GSA Schedule, use of the ODIN contract, and a consolidated Agencywide CPC approach (combining networked copiers and standalones under the same contract). Estimates were obtained from GSA, the ODIN vendors, and independent vendors to price the networked copiers under each option. For Centers participating in ODIN the cost of attaching copiers to the network was calculated using established NAD fees. These fees would be applicable under the GSA or Agencywide CPC approach. The results are presented in this section.

5.1 Assumptions

- A 5-year contract term was used.
- The Agency Printing and Copier Managers provided estimates of their networked copier requirements over the contract period. Six Centers believe they will migrate to networked copiers, while the others could not estimate with enough certainty to include networked figures in their requirements. The total number of copiers ranged from 85 in Year 1 to 165 in Year 5. (See table 9.) The average number of networked copiers across all 5 years is 135, so 135 will be used as the estimated figure for calculation purposes.
- ODIN prices are assumed to be constant over the five years of the contract, although actual implementation of networked copier service at each Center would cross over at least two Delivery Order periods (with potential cost implications).
- All costs are estimated unless stated otherwise and do not necessarily reflect how the vendors would bid the procurement.

Table 9. Estimated Requirements for Networked Machines

	Year 1	Year 2	Year 3	Year 4	Year 5
ARC	0	20	30	30	30
GSFC	0	5	5	5	5
HQ	50	50	50	50	50
JPL	20	20	20	20	20
JSC	15	25	35	45	55
LaRC	0	5	5	5	5
Total	85	125	145	155	165

Average Annual Requirement = 135

5.2 Baseline Case

The GSA cost for 135 networked copiers was derived from GSA's online "Multiple Award Schedule" using the requirements of a 4-hour return to service and a minimum copy speed of 55 pages per minute (ppm). The average annual unit price for the networked copiers is $13,216. The total estimated annual cost for GSA networked copiers is $1,800,000. (See table 10.)

Table 10. Baseline Case Estimate for 135 Networked Machines

	ESTIMATED YEARLY COST	ESTIMATED 5 YEAR COST
Baseline Case (GSA)	$1,800,000	$9,000,000
NAD	$52,500	$262,500
Total	$1,852,500	$9,262,500

In addition, a networked attached device (NAD) cost also applies to this option. ODIN vendors provided actual monthly NAD costs for the Centers that have networked copier requirements. The NAD costs were applied to the average projected copier requirements for each year, for a total annual estimate of $52,500. (See table 11.)

Table 11. Network Attached Devices (NAD) Costs

CENTER ESTIMATE FOR NETWORKED MACHINES	AVERAGED NO. OF NETWORKED MACHINES	MONTHLY NAD COST Each Machine	YEARLY NAD COST
AMES	22	–	–
GODDARD	4	$12.00	$576
HEADQUARTERS	50	$29.75	$17,850
LANGLEY	4	$27.08	$1,300
JSC	35	$78.03	$32,773
JPL	20	–	–
TOTAL	135		$52,499

Note: Network at Ames will not be under ODIN; no NAD charges known. JPL is not under ODIN. No NAD charges apply.

The total estimated annual cost of acquiring networked copiers through GSA is $1,852,500.

5.3 ODIN Contract

Under this scenario, the ODIN contract would be modified to include high-speed networked copier services, and workgroups would order copier "seats" through their Center's ODIN provider. The network connection and maintenance for networked copiers would be included in the ODIN seat price.

ODIN vendors provided cost estimates for networked copiers, which averaged $14,650 per unit. This average was applied to the average network copier requirement per year of 135, for a total of $1,980,000 per year and $9,900,000 for the 5-year total. (See table 12.)

Table 12. ODIN Network Copier Service Estimates

VENDOR	ESTIMATED YEARLY COST
CSC	$ 955,800
DYNCORP	$ 1,539,000
FDC	$ 2,106,000
ACS (formerly Intellisource)	$ 1,944,000
OAO	$ 2,741,040
SAIC	$ 1,458,000
Wang	$ 3,100,680
Total	$13,844,520
Average	$ 1,980,000

• Although no one ODIN vendor will be responsible for all 135 networked copiers across the Agency, an average of their estimates was considered to be a reasonable approximation of the ODIN cost.

5.4 Agencywide CPC Contract

The business case for standalones assumed an Agencywide competition among independent vendors for NASA's standalone copier requirements. Under this scenario, networked requirements would be included in the same solicitation. Again, NASA received two responses to its request for information: Vendor B's estimate was 57 percent higher than Vendor A's estimate, and was not considered to be realistic. (See table 13.) As a result, Vendor A's estimate is being used for comparison purposes and will be referred to as the New CPC estimate.

Table 13. Independent Vendors Estimated Costs for 135 Networked Machines

	ESTIMATED YEARLY COST	ESTIMATED 5 YEAR COST
Vendor A	$1,200,000	$6,000,000
Vendor B	$1,882,000	$9,410,000

Using the average annual requirement of 135 machines and Vendor A's $8,880 estimate per machine, the total annual estimate for the Agencywide approach is $1,200,000. (See table 14.)

Table 14. New CPC Estimate for 135 Networked Machines

	YEARLY COST	ESTIMATED 5 YEAR COST
New CPC	$1,200,000	$6,000,000
NAD	$52,500	$262,500
Total	$1,252,500	$6,262,500

The ODIN NAD charges applied to the 135 copiers result in an additional cost of $52,500 per year.

The total annual estimate for the Agencywide CPC approach is $1,252,500.

5.5 Analysis

Table 15 depicts the cost comparison of the Baseline Case, the ODIN approach, and the Agencywide CPC contract. The Agencywide CPC approach represents a cost savings of 32 percent when compared to the Baseline Case and 37 percent when compared to the ODIN option, and is clearly the most cost-effective solution of the three. It is a reasonable conclusion that pursuing an Agencywide contract for both standalone and networked copier requirements would result in the best possible price for NASA.

Table 15. Summary Cost Comparison for Networked Business Case

	ESTIMATED YEARLY COST	ESTIMATED 5 YEAR COST
Baseline (GSA)	$1,852,500	$9,262,500
ODIN	$1,980,000	$9,900,000
New CPC	$1,252,500	$6,262,500

5.6 Total Cost Comparison for Standalones and Networked

While a cost comparison is helpful in showing the relative cost difference among the approaches set forth in this business case, the total cost to the Agency must also be compared to the current costs to provide context. The standalone copier requirement was compared to the current contract estimate at completion in Section 4, but it must be recognized that the networked copiers represent a new requirement for NASA, and therefore all associated costs are additive.

Table 16 shows the total cost comparison for all three options compared to the cost of the current contract. (For the ODIN option, the cost of the Agency CPC scenario was used for the standalones, assuming that even if the networked copiers were

Table 16. Total Cost Comparison of Approaches to Copier Service Acquisition

	Current CPC	GSA Baseline	ODIN	New CPC
Standalones	$18,746,000	$37,000,000	$20,153,000	$20,153,000
Networked	N/A	$9,262,500	$9,900 000	$6,262,500
Total	$18,746,000	$46,262,500	$30,053,000	$26,415,500

obtained through the ODIN contract, an Agencywide CPC contract would be awarded for the standalone machines.) Even the lowest cost option, the Agencywide CPC contract, represents a potentially significant cost increase over the current contract. Most of the increase is attributed to the three major factors cited in Section 4.6: higher cost of digital technology, favorable rates on current contract, and lack of competition, keeping the preliminary estimates high.

Given the limited budget constraints that the Agency is facing, it is unreasonable to assume that there will be additional funding available to cover a potential 41 percent increase for copier services. The NASA Printing and Copy Managers are developing a mitigation plan to prepare for the possible shortfall in funding. Strategies of the plan include:

- Effectively manage the CPC program to help control costs. The Printing and Copy Managers will work diligently to "right-size" copier requirements to ensure that NASA takes advantage of the technology advances and keeps copier requirements to a minimum. For example, the estimated total copier requirement for the new contract matches the existing requirement, but it is expected that as the Agency migrates to the networked machines, the total number of copiers will decline. The ODIN Model for networked printers is leading the way for networked copiers, and the Printing/Copy Managers will need to help users see the benefits of having higher-quality services available within walking distance of their workspace.
- Use the procurement process to inform and challenge the CPC vendors. We expect some robust competition in the follow-on procurement, and NASA will take advantage of all opportunities to communicate with the potential vendors about our need to obtain the best value for the follow-on procurement. It is planned that the current budget figures will be published in the draft solicitation, and NASA will obtain feedback and ideas from vendors on potential ways to maximize competition and get the lowest price while maintaining quality.
- Develop a Workgroup Model to use as a guide in determining the appropriateness of networked devices in office settings. One for one, the networked machines are more expensive than the standalones, but the additional cost can be offset if the workgroup agrees to give up additional peripheral equipment, such as desktop printers, scanners, and even additional standalone machines. A draft Workgroup Model was developed for this business case in an attempt to describe a scenario where networked copier services would be cost-effective. Data was collected from workgroups that have implemented these services in pilot programs across the Agency, and a typical Break-even Workgroup Model was derived. (See figure 3.) The Break-even Model is defined as a workgroup setting where the cost of acquiring and maintaining a non-networked office configuration over five years is approximately equal to the cost of migrating to a networked copier environment over the same period of time. In order to achieve appreciable savings, the workgroup would need to have more start-

ing peripheral equipment to give up or have a more aggressive go-to position in the networked environment. The NASA Printing and Copy Managers will continue to refine this Model in preparation for the follow-on contract.

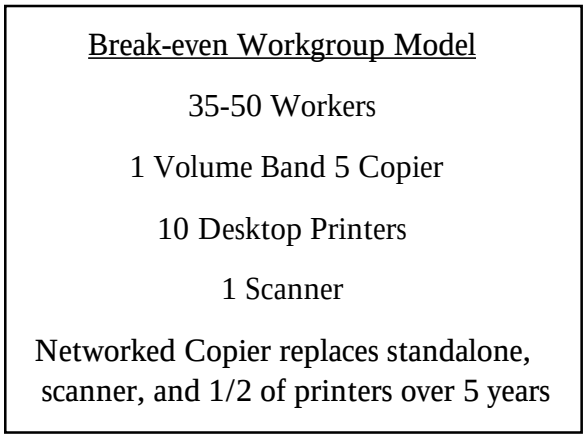


Figure 3. Break-even Workgroup Model.

6 MARKET INFORMATION AND OTHER CONSIDERATIONS

6.1 Competitive Market Information

GSFC has conducted extensive discussions with independent copier vendors in preparation for this business case. We know from these discussions that there is a lot of interest in the follow-on. The independent copier vendors will very carefully analyze the government's requirements, the quantity of machines involved, the term of the contract, and the Government's requirements for standalone and networked machines.

The estimates provided by the copier vendors for this business case assumed that both standalone and networked copiers would be included under one contract. Vendors A and B, in addition to other vendors who have met with NASA officials, have indicated that if NASA were to bid only standalone equipment in the follow-on, the bid cost would most likely be higher due to the implied threat of standalone machines migrating to the network. This could mean a potential loss of revenue for the standalone vendor.

Under CPC contracts, vendors typically recoup the cost of their equipment in the first three years of the contract. Therefore, a long-term commitment by the Government (e.g., a 1-year base with one 4-year option) yields the best cost.

One potential challenge of the consolidated approach is that troubleshooting networked copiers may be complicated under a consolidated procurement since the equipment would be under the CPC contract, and the network at some NASA sites would be managed by the ODIN vendor.

The ODIN Program Office has provided assurance that service calls would be handled in the same manner as they are under the present CPC contract. Customers of the networked copiers would initiate one call for service (to their ODIN Help Desk). The initial analysis of whether the problem is the network or the equipment would be performed by ODIN. If it is a network problem, then ODIN is responsible to fix it. If it is an equipment problem, ODIN will notify the CPC point-of-contact. A clear definition of roles and responsibilities between the CPC and ODIN vendors will mitigate the risk of service problems under the Agencywide CPC contract.

6.2 ODIN Market Information

Under the ODIN option for networked copiers, estimates were obtained assuming that one ODIN vendor would be supplying all 135 networked copiers across the Agency. However, because there are several ODIN vendors serving the different Centers, a single vendor would not be able to "win" the networked copier contract for the Agency. Instead, the networked copier (based on Agency specifications) would be either a "seat" or a catalog item for which the ODIN vendor serving each NASA site would set a price. As with NADs and

computer seats, the price would vary from one ODIN vendor to another, and it is likely that the total cost to the Agency (based on a few networked copiers at each Center) would be higher than the estimates provided by the vendors for this pricing exercise.

If the networked equipment was provided by ODIN, concern over the continuity of service has been expressed since ODIN vendors are on 3-year delivery orders which may or may not be renewed by a Center. The ODIN Program Office assures that there would not be a lapse in service because the incoming vendor is required to maintain a level of service although they may choose to accept transfer of equipment from the previous vendor or replace the equipment. In either case, there is potential for disruption to customers.

6.3 Phase-in of New Contract

The current CPC contract expires on July 31, 2001. Assuming the appropriate approvals are obtained during the month of October 2000 to proceed with an Agencywide procurement, the pre-award schedule accommodates all planned activities with a contract start date of August 1, 2001. However, it would be unreasonable to expect any copier vendor to be prepared to install over 2,000 copiers across the Agency on the first day of the contract. In order to ensure a successful deployment and implementation, a Phase-in Plan is being developed.

The Plan would allow for a phased start-up by geographic region over a 6-month period beginning August 1, 2001. (See table 17.) The current contract was phased in over a period of 15 months and was scheduled to coincide with the end dates of the individual Center's existing copier contracts. A regional phase-in for the new contract would facilitate a planned, orderly transition within a group of Centers before moving on to the next area. The details of the plan will be provided by the vendors as part of their proposals.

As part of the transition planning, the existing contract will need to be extended to enable continuity of copier services. The incumbent contractor has provided cost estimates for extending the contract in accordance with the regional phase-in schedule. Although there may be a net cost increase during the first year of the contract for the phase-in/phase-out approach, it is expected that the increase will be more than offset by the assurance that the vendor will be able to successfully implement the new copier contract.

Table 17. Proposed Regional Phase-in Plan

AUGUST 1, 2001	SEPTEMBER 15, 2001	NOVEMBER 1, 2001	DECEMBER 15, 2001
GISS	KENNEDY	AMES	GLENN
GODDARD	MARSHALL	DRYDEN	JOHNSON
HEADQUARTERS		JET PROPULSION LAB	STENNIS
LANGLEY			WHITE SANDS
WALLOPS			

7 RECOMMENDATION

After analyzing all of the information gathered for this business case, the recommendation is to proceed with a competitive Agencywide CPC procurement for standalone and networked copier services. The Agency should expect that all Centers will utilize this contract for their standalone requirements. For the networked requirements, each Center is expected to evaluate the cost and benefits of migrating to a networked copier environment. If determined to be in their best interests, the Centers should be strongly encouraged to first consider the proposed Agencywide contract, as it is the preferred choice and recommendation of this business case.

The choice of an Agencywide consolidated contract is reinforced by the market knowledge of the NASA Printing and Copy Managers, who believe that independent vendors' bidding will be very competitive given contract terms which include both standalone and networked copiers and a 1-year basic period with a one 4-year option term. Their bidding may result in even greater savings than the flat projections indicate. For example, under the current contract, the CPC vendor proposed a significant reduction in costs for Years 4 and 5 based on the assumption that they would recoup their capital investment over the first three years of the contract. It is possible that CPC vendors would use the same or similar pricing strategy under the new contract, which would result in lower costs than estimated here.

An additional significant benefit of a consolidated CPC contract would be the ease of transitioning from standalone to networked copiers. Indeed, it may be as simple as adding a network card and Local Area Network (LAN) connection to digital equipment already in place. Customers would not have to leave one program to enter another copier program in order to get networked equipment.

A consolidated contract would mean a single point-of-contact for troubleshooting, repairs and upgrades. It also retains the advantages of a streamlined procurement process and centralized administration achieved in the current CPC contract, which has resulted in enhanced programmatic management, controls, and reporting.

The viewpoint of NASA's Printing and Copy Managers is keenly focused on the cost and administrative savings of a consolidated CPC contract for standalone and networked machines because it directly affects their business. The standalone copiers represent 94 percent of the entire requirement, and in order for NASA to take full advantage of the volume discounts, there must be full Agency participation. For networked copiers, although the business case makes a convincing case that consolidation will yield the best price, from an individual Center perspective, there may be programmatic objectives or other factors that would affect the selection of a contract vehicle. This business case is submitted in the expectation that this research will facilitate selection of the best contract option for NASA's Cost-per-Copy program, taking all appropriate Agency goals into consideration.